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12. The apparatus of claim 10 wherein the transmitter is a heart rate monitor.

al 13. The apparatus of claim 10 wherein the belt is adjustable in slope and the apparatus for adjusting includes a lifting motor.

14. The apparatus of claim 10 wherein the belt is adjustable in rotational speed and the apparatus for adjusting includes a treadmill motor.

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## II. REMARKS

In the first office action in this case, the Examiner rejected claim 1 as being anticipated by either Shyu or Greunangerl. Further, he rejected claim 2 as being obvious based on Shyu or Greunangerl in view of Fitz Gerald.

By this amendment and response, Applicant has cancelled original claims 1 and 2 and has added new claims 3 through 14 for examination.

Shyu discloses a treadmill in which the rotational speed of the treadbelt is automatically controlled in response to the position of the user on the belt. The user's position is determined by continuously comparing an ultrasonic wave transmitted by an ultrasonic transmitter mounted in the controller portion of the treadmill to the wave reflected from the user's chest. If the distance between the user and the transmitter is

diminishing, it indicates that the user is advancing on the treadmill, so the controller will increase the speed of the belt. Conversely, if the distance is increasing, the controller will reduce the belt speed.

While Shyu's device is similar to the present invention in that it utilizes the position of the user on the belt to control belt speed, the means by which that position is sent is quite different. First, Shyu employs an ultrasonic transmitter and receiver, both of which are mounted to the treadmill (Shyu, column 3, beginning at line 42). In contrast, the present invention as now claimed employs an electromagnetic transmitter attached to the user and a receiver mounted to the treadmill. According to new claim 6, that transmitter may be a heart rate monitor. There is no disclosure or suggestion in Shyu that such means should be used to detect the position of the user on the belt.

Greunangerl also discloses a treadmill in which the speed of the belt is automatically adjusted as a function of the position of the user on the belt. According to the discussion in his patent beginning in column 5 at line 3, the position of the user on the belt is detected by means of a position sensor which he states may be "either a potentiometric device with a mechanically-linked cable, an infrared/invisible light, or ultrasonic or a laser controlled unit". The position sensor is located in the "vicinity of the transportation belt" (see column 3, lines 19 through 21). He does not define the meaning of the term "potentiometric device" in the specification, nor does he describe such a device

in any detail. So far as the Applicant is aware, the term has no generally accepted meaning, so Applicant believes insofar as this term is concerned that Greunangerl's specification is inoperative. He does give other specific examples of devices that may be used as a position sensor, but he nowhere suggests the use of an electromagnetic transmitter attached to the user and a receiver attached to the treadmill according to the invention as now claimed. Certainly, he makes no suggestion that the transmitter could be a conventional heart rate monitor according to new claim 6.

Therefore, it is the position of the Applicant that neither Shyu nor Greunangerl disclose or suggest the invention according to new claims 3 through 14.

Finally, the Fitz Gerald patent, although predating both the Shyu and Greunangerl patents by over 50 years, also describes a treadmill in which the tread speed is automatically controlled by essentially the same principle upon which the Shyu and Greunangerl devices are based. As described on page 2 beginning at line 49, Fitz Gerald indicates that the user's position may be sensed by an arrangement of photo-electric cells and associated light sources projecting across the track which would be interrupted by the user's body. Also, he suggests the use of cooperating pairs of electrostatic plates and electrodes. As shown in Figures 1 and 2 these sensors would be mounted to the treadmill frame. Again, while his control principle is similar to that of the present invention, the means that he employs to accomplish that control is quite different. Nowhere in his

specification does he disclose or suggest the use of an electromagnetic transmitter mounted to the user cooperating with a receiver attached to the treadmill to obtain the position of the user on the track according to the invention as now claimed.

In summary, the Applicant believes that none of the references cited by the Examiner, either singularly or in combination, disclose or suggest the invention now claimed and that the invention is patentable over all prior art cited by the Examiner or known to the Applicant. Accordingly, the Applicant requests that the Examiner re-examine this application in view of the above amendments and remarks, withdraw all rejections and objections of record, and allow each of the claims now proposed.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 18-1355.

DATED this 13<sup>th</sup> day of June 2002.

Respectfully submitted,

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